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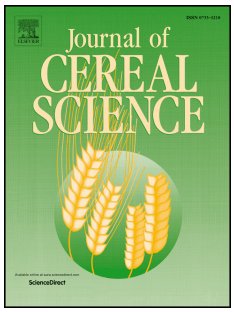

Effects of heat processing methods on protein subfractions and protein degradation kinetics in dairy cattle in relation to protein molecular structure of barley grain using advanced molecular spectroscopy

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Interpretive Summary: "Alterations in protein molecular structures of barley grain upon different heat processing revealed by Attenuated Total Reflectance Fourier Transform Infrared Molecular Spectroscopy in association with protein subfractions and protein degradation kinetics in dairy cows". Autoclave heating decreases protein degradability in the rumen and improves protein intestinal digestion, when compared to raw, dry heated and microwave-heated grains. The changes in protein inherent molecular structures induced by heat processing can be associated with the changes the protein nutrient supply and availability. Molecular spectral features have great potential to be used as predictors for nutrient availability of grains in dairy cows.

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